Opinion - Plagiarism by Dr. Bin Li

Dr. Bin Li has failed to disclose earlier work by Eytan Suchard from 2013-2025 and by Sam Vaknin 1982-1984. Falling to do so after a letter was sent to him, constitutes plagiarism

Regarding his papers, e.g.: “Geometric and Topological Unification of Gravity and Electromagnetism via a Timelike Vector Field” by Bin Li - https://www.preprints.org/manuscript/202507.1262

Bin Li uses a timelike unit vector

$$g_{\mu\nu}\,\Phi^{\mu}\;\;\Phi^{\nu}\;=\;-\,1\text{forall}x\in M, \qquad (1)$$

He uses the Frobenius theorem as was used in Eytan Suchard’s 2017 publication, and in https://arxiv.org/pdf/1806.05244v41 . These publications will be accounted for.

we invoke Frobenius' theorem [51]. Define the projection tensor onto the spatial hypersurface orthogonal to Φ^{μ} by

$$h_{\mu\nu}:=g_{\mu\nu}+\;\Phi_{\mu}\;\Phi_{\nu}\;. \qquad (2)$$

Then the antisymmetric part of the projected derivative defines the vorticity or twist tensor:

$$\omega_{\mu\nu}:=h_{\mu}^{\alpha}h_{\nu}^{\beta}\nabla_{[\alpha}\;\Phi_{\beta]}\;. \qquad (3)$$

See theorem 3 in v41. See also the paper from 2017.

Important: Unlike Bin Li’s claims, there is no Lorentz violation in Geometric Chronon Field Theory. A timelike vector does not violate Lorentz transformations. His claim is nothing more than pure damage to the credibility of chronon field theory.

2013 publication (Suchard) - “Absolute Maximum Proper Time to an Initial Event, the Curvature of Its Gradient along Conflict Strings and Matter”

The first publication in which an acceleration of a unit vector was presented was in the following, see page 795, From minimum action of $Z=P_{\mu}P^{\mu}$ and $U_{\lambda}=\frac{Z_{\lambda}}{Z}-\frac{Z_{k}P^{k}P_{\lambda}}{Z^{2}}$ and $L=\frac{1}{4}U^{k}U_{k}$

See Journal of Modern Physics, 2013, 4, 791-806 http://dx.doi.org/10.4236/jmp.2013.46109 Published Online June 2013 (http://www.scirp.org/journal/jmp).

In this publication, the acceleration U_k is not yet derived from $\frac{P_k}{\sqrt{\square}}$ in the real case.

2014 publication (Suchard) – "Electro-gravitational Technology via Chronon Field"

A second publication from 2014 is

Published: 2014-06-30 **DOI:** 10.9734/PSIJ/2014/11129

Page: 1158-1190 **Issue:** 2014 - Volume 4 [Issue 8]

The derivation of acceleration from a **unit vector** was explicit in 2014 in term (7)

$$Curv^2 \equiv \frac{d}{dt}\left(\frac{P_\lambda}{\sqrt{P^k P_k}}\right)\frac{d}{dt}\left(\frac{P_\varpi}{\sqrt{P^k P_k}}\right)g^{\lambda\varpi} \qquad (7)$$

$$\hat{\Phi}^i(x) := \frac{\Phi^i(x)}{\sqrt{g_{jk}\,\Phi^j\,\Phi^k}}, i = 1,2,3, \qquad (12)$$

(7) is plagiarized by Bin Li,

<u>The use of a timelike unit vector to derive the electric field is therefore not an idea of Dr. Bin Li.</u>

And also the use of an antisymmetric matrix which results from this acceleration for the derivation of the electric field can be seen in :

$U_\nu = A_{\varpi\nu}\frac{P^\varpi}{\sqrt{P^\lambda P_\lambda}}$ such that $A_{\varpi\nu} = -A_{\nu\varpi}$ and $A_{\varpi\nu}$

See also the following citation (Suchard):

expressed as a 4-vector because a 4-vector does depend on a specific trajectory and by Tzvi Scarr and Yaakov Friedman such a field is expressible by an anti-symmetric matrix $A_{\varpi\nu} = -A_{\nu\varpi}$ such that if V_ϖ is the 4-velocity such that $V_\varpi V^\varpi = 1$ then the 4-acceleration is actually $a_\nu = A_{\varpi\nu}V^\varpi$. The curvature of particles that measure the upper limit of measureable time from an event back to near the "big bang" singularity event or events will

The relation between the electric field and the acceleration field is seen in:

$$\frac{a^2}{C^4} \approx \frac{K\varepsilon_0}{2C^4} E^2 \Rightarrow \frac{a}{C^2} \approx \sqrt{\frac{K\varepsilon_0}{2}} \frac{|E|}{C^2} \qquad (6)$$

The idea that the electric field is actually an acceleration field of a unit vector, and it leads to an anti-symmetric matrix is not an idea of Dr. Bin Li.

2015 publication (Suchard) - “Electro-Gravity via Geometric Chronon Field”

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DOI: 10.9734/PSIJ/2015/18291

Page: 152-185

Issue: 2015 - Volume 7 [Issue 3]

The **explicit** derivation of an electromagnetic-like $F_{\mu\nu}$ is seen in the 2015 publication:

The derivation of the electromagnetic $F_{\mu\nu}$ from a unit vector $\frac{P_\mu}{\sqrt{\square}}$ is seen in (15), (17), (18),

$$Z \equiv N^2 \equiv \frac{P_\mu P^{*\mu} + P^*_\mu P^\mu}{2} \text{ and } Z_\lambda \equiv \frac{dZ}{dx^\lambda} \text{ and } \hat{U}_\lambda = \frac{Z_\lambda}{Z} - \frac{Z_k P^{*k} P_\lambda}{Z^2} \qquad (15)$$

$$A_{\mu\nu} = \frac{U_\mu P_\nu - P_\mu U_\nu}{2\sqrt{Z}} = \frac{1}{2\sqrt{Z}}\left(\frac{Z_\mu P_\nu}{Z} - \frac{Z_k P^{*k} P_\mu P_\nu}{Z^2} - \left(\frac{Z_\nu P_\mu}{Z} - \frac{Z_k P^{*k} P_\nu P_\mu}{Z^2}\right)\right) =$$
$$\frac{1}{2\sqrt{Z}}\left(\frac{Z_\mu P_\nu}{Z} - \frac{Z_\nu P_\mu}{Z}\right) = \left(\frac{P_\mu}{\sqrt{Z}}\right)_{,\nu} - \left(\frac{P_\nu}{\sqrt{Z}}\right)_{,\mu} = \left(\frac{P_\mu}{\sqrt{Z}} + \phi_\mu\right)_{,\nu} - \left(\frac{P_\nu}{\sqrt{Z}} + \phi_\nu\right)_{,\mu} \qquad (17)$$

Following is an offered complex form of (17),

$$\frac{1}{4}\left(A_{\mu\nu} A^{*\mu\nu} + A^*_{\mu\nu} A^{\mu\nu}\right) = \frac{1}{4}\left(\left(\frac{U_\mu P_\nu - P_\mu U_\nu}{2\sqrt{Z}}\right)\left(\frac{U^{*\mu} P^{*\nu} - P^{*\mu} U^{*\nu}}{2\sqrt{Z}}\right) + \ldots\right) =$$
$$\frac{1}{16}\left(\left(U^*_\mu U^\mu + U^*_\nu U^\nu\right) + \left(U_\mu U^{*\mu} + U_\nu U^{*\nu}\right)\right) = \frac{1}{4}\left(\frac{U^*_\mu U^\mu + U^*_\nu U^\nu}{2}\right) \qquad (18)$$

which is the time field curvature action. In the real case where $A_{\mu\nu} = A^*_{\mu\nu}$ we define $F_{\mu\nu} = \frac{1}{\sqrt{2}} A_{\mu\nu}$ and the action (16) takes the form $F_{\mu\nu} F^{\mu\nu}$ which reminds of the electro-magnetic theory but without

On page 170, **charge-based gravity and anti-gravity, which cannot be derived from the Yang – Mills approach, appears:**

$$\frac{1}{4}\frac{8\pi}{\sigma}\left(U_\mu U_\nu - \frac{1}{2} U_k U^k g_{\mu\nu} - 2U^k{}_{;k} \frac{P_\mu P_\nu}{Z}\right) = R_{\mu\nu} - \frac{1}{2} R g_{\mu\nu}$$

The divergence of the electric charge up to multiplication by a constant is $-2\,U^{k}{}_{;k}$.

An assessment of the relation between charge and gravitational mass can be found on page 177,

$$\frac{\pm 1\,Coulomb}{\sqrt{16\pi\varepsilon_0 K}} = \pm 5.80233169106035888812808337934 17\times 10^{9}\,Kg$$

Today there is a better assessment of 5.802135 * 10^-9 Kg, that was not available in 2015.

In the non-covariant classical limit, the acceleration is parallel and proportional to the electrostatic field. Since the nuclei do not flow in static high voltage capacitors, the sum of the electric fields that act on the nuclei of each atom must be zero. Therefore, from the prediction on pages 170, 177 in 2015, no anomalous forces are expected to be measured when using static high voltage capacitors.

2017 publication (Suchard) – “Electro-gravity via geometric chrononfield”

Eytan H. Suchard

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Journal of Physics: Conference Series, Volume 845, 10th Biennial Conference on Classical and Quantum Relativistic Dynamics of Particles and Fields 6–9 June 2016, Ljubljana, Slovenia **Citation** Eytan H. Suchard 2017 *J. Phys.: Conf. Ser.* **845** 012019 **DOI** 10.1088/1742-6596/845/1/012019

Derivation of the electric field from a unit vector is seen already in (1),

will use the notation $Z \equiv N^2 \equiv \|P_s\|^2 = P^s P_s$. The next step is to calculate the acceleration of such a particle, based on P_i. Taking the exterior derivative of $\frac{P_i}{\sqrt{Z}}dx^j$ as a 1-form, we will derive a 2-Form, while we continue with differential geometry conventions, comma as derivative and semi-colon as covariant derivative, $Z_{,i} \equiv Z_i \equiv \frac{dZ}{dx^i}$ and for a vector field V_k, $V_{k,i} \equiv \frac{dV_k}{dx^i}$ where x^i are the contravariant coordinates. Also, the covariant derivatives are defined as in differential geometry, $V_k{}_{;i} \equiv V_{k,i} - \Gamma^s{}_{ki} V_s$ and $V^k{}_{;i} \equiv V^k{}_{,i} + \Gamma^k{}_{si} V^s$ where $\Gamma^k{}_{si}$ are the affine connection, also known as second-type Christoffel symbols. We derive,

$$d\frac{P_i}{\sqrt{Z}}dx^i = (\frac{P_i}{\sqrt{Z}})_{,j}\,dx^i \wedge dx^j = ((\frac{P_i}{\sqrt{Z}})_{,j} - (\frac{P_j}{\sqrt{Z}}{}_{,i}))dx^i \wedge dx^j \Rightarrow$$
$$(\frac{P_i}{\sqrt{Z}})_{,j} - (\frac{P_j}{\sqrt{Z}}{}_{,i}) = (\frac{P_i{}_{,j}}{\sqrt{Z}} - \frac{P_i Z_j}{2Z^{3/2}}) - (\frac{P_j{}_{,i}}{\sqrt{Z}} - \frac{P_j Z_i}{2Z^{3/2}}) = \frac{P_j Z_i}{2Z^{3/2}} - \frac{P_i Z_j}{2Z^{3/2}} \quad (1)$$

On page 6, a derivation of an electric field-like tensor is seen as

$$\frac{U_{\mu}U^{\mu}}{4}\sqrt{-g} = \frac{\tilde{F}_{\mu\nu}\tilde{F}^{\mu\nu}}{4}\sqrt{-g}$$

Plagiarism by Bin Li:

4.3. Emergence of $A_\mu = \partial_\mu\theta$, and $F_{\mu\nu}$

Locally, the internal phase $\theta(x)$ defines a section of the U(1) bundle, from which we construct the gauge potential:

$$A_\mu(x) := \partial_\mu\theta(x), \quad (7)$$

which transforms under local phase shifts $\theta(x) \to \theta(x) + \alpha(x)$ as

$$A_\mu(x) \to A_\mu(x) + \partial_\mu\alpha(x),$$

consistent with U(1) gauge symmetry. The field strength tensor is then defined as the exterior derivative:

$$F_{\mu\nu} := \partial_\mu A_\nu - \partial_\nu A_\mu = \partial_\mu\partial_\nu\theta - \partial_\nu\partial_\mu\theta, \quad (8)$$

The phase gradient between (7) and (8) in Bin Li's work, plagiarized (17) the 2015 publication in 10.9734/PSIJ/2015/18291 .

(8) plagiarized (1) in 10.1088/1742-6596/845/1/012019 .

For symmetries, please refer to "2. SU(2) X U(1) symmetries – partially symplectic space-time" on page 7. Also refer to "3. SU(3) symmetry" on page 9.

See,

3. SU(3) symmetry

We may want to express the acceleration matrix $A_{\alpha\beta}$ by three scalar fields that are defined in thefoliation F that is perpendicular to $\frac{P_i}{\sqrt{Z}}$. This is because P_i is a geometric object that defines foliations of space-time and can be conversely defined by the foliations. Another motivation is to show that $SU(3)$ that is seen in Quantum Chromo-Dynamics, may originate from geometry. By a theorem of Frobenius, necessary conditions for 3 vectors $h(j=1,2,3)$ to span the foliation F is that the vectors $h(s)$ areHolonomic if their Lie brackets depend on them $[h(i),h(k)] = \sum_{j=1}^{3} c_j h(j)$ for some coefficients c_j. The Lie brackets of each two vectors must depend on the vectors that span $T(F)$. We may write our 3 scalars a,b,c (here C is not the speed of light and not the previous coefficients but a scalar field) and their gradients that span the foliation's tangent space $T(F)$ as follows, $h_k(1) = \frac{d}{dx^k}a$, $h_k(2) = \frac{d}{dx^k}b$, $h_k(3) = \frac{d}{dx^k}c$.

We now express $A_{\alpha\beta}$ by $h_k(1)$, $h_k(2)$, $h_k(3)$ in a covariant formalism but we need some constraint on P_μ.

The use of holonomies in the leaf perpendicular to the unit vector $\frac{P_\mu}{\sqrt{\square}}$ is therefore not an idea by Dr. Bin Li.

Dr. Bin Li also fails to mention an early work from 1982-1984 by Dr. Sam Vaknin, which is brought as "7. Vaknin's theory".

Vaknin's description of the realization of event is as follows:*"Time as a wave function with observer-mediated collapse. Entanglement of allChronons at the exact "moment" of the Big Bang. A relativistic QFT with Chrononsas Field Quanta (excited states.) The integration is achieved via quantumsuperpositions".*

In addition, Bin Li, reinjected gauge fields, which the Geometric Chronon Field Theory tries to avoid. By publishing his papers without referring to prior work he obfuscates the very reason for which chronon field theory was developed in the first place and thus causes more harm than good to the subject. Both charge-based gravity and anti-gravity and particle mass ratios are the result of integrating matter and force fields together as a result of non-geodesic accelerations without the use of Yang – Mills theory. In the Standard Model, the role of gauge fields was to establish interactions between particles that otherwise would not interact. The Geometric Chronon Field Theory does not need such a prosthetic addition because the acceleration fields already interact. The derivation of Gauss's law is inevitable from:

$$\frac{1}{4}\frac{8\pi}{\sigma}(U_\mu U_\nu - \frac{1}{2}U_k U^k g_{\mu\nu} - 2U^k{}_{;k}\frac{P_\mu P_\nu}{Z}) = R_{\mu\nu} - \frac{1}{2}Rg_{\mu\nu}$$

Where $-\frac{1}{2}\varepsilon_0 E^2 \approx \frac{c^4}{8\pi K}\frac{1}{4}U_\mu U^\mu$ and by (26) on page 13,

$$\frac{U_\mu{}^{;\mu}}{2} = Div(\frac{U_\mu}{2}) = Div(a_\mu / c^2) \approx \frac{\sqrt{4\pi K\varepsilon_0}}{c^2}Div(E) = \frac{\sqrt{4\pi K\varepsilon_0}}{c^2}\frac{\rho}{\varepsilon_0} = \sqrt{\frac{4\pi K}{\varepsilon_0}}\frac{\rho}{c^2} \quad (26)$$

"Appendix B – Planck Area Gravity – Based on a lecture by professor Seth Lloyd of the M.I.T combined with the Geometric Chronon model and its correlation with sub-atomic particles" on pages 29-32 is a precursor to particles mass ratios. This is a new approach which was reached due to the new approach of not using gauge theory. See (b.1)-(b.7).

2018-2025 publications (Suchard)– these publications point to a slow but steady progress of the theory. https://arxiv.org/pdf/1806.05244v41 was the last version before the plagiarism by Bin Li was published in preprints. (13.7) – (13.13) is an example that shows that gauge fields are redundant in the geometric chronon field theory.

Bin Li's publications, without mentioning early work, obfuscate the approach in which Lagrangians predict forces without resorting to

gauge fields. By omission of existing prior research he causes more harm than good.

“Appendix C: Generalization to more than one generalized Reeb class vector” is the idea of how to derive the electroweak force and the strong force in (64), (now (64.b) in late 2025 versions), on pages 104, 105 without using gauge fields. At that point, the offered electroweak Lagrnagian is not complete, however the strong force Lagrangian has very encouraging properties without directly using any holonomy of the 3D foliation, perpendicular to $\frac{P_\mu}{\sqrt{\square}}$.

$$+\left|\begin{matrix} 1 & \frac{p_\mu S^{*\mu}+p^*_\mu S^\mu}{2\sqrt{2Z}} & \frac{p_\mu W^{*\mu}+p^*_\mu W^\mu}{2\sqrt{2Z}} & \frac{p_\mu T^{*\mu}+p^*_\mu T^\mu}{2\sqrt{2Z}} \\ \frac{p_\mu S^{*\mu}+p^*_\mu S^\mu}{2\sqrt{2Z}} & \frac{S_\mu S^{*\mu}+S^*_\mu S^\mu}{8} & \frac{S_\mu W^{*\mu}+S^*_\mu W^\mu}{8} & \frac{S_\mu T^{*\mu}+S^*_\mu T^\mu}{8} \\ \frac{p_\mu W^{*\mu}+p^*_\mu W^\mu}{2\sqrt{2Z}} & \frac{W_\mu S^{*\mu}+W^*_\mu S^\mu}{8} & \frac{W_\mu W^{*\mu}+W^*_\mu W^\mu}{8} & \frac{W_\mu T^{*\mu}+W^*_\mu T^\mu}{8} \\ \frac{p_\mu T^{*\mu}+p^*_\mu T^\mu}{2\sqrt{2Z}} & \frac{T_\mu S^{*\mu}+T^*_\mu S^\mu}{8} & \frac{T_\mu W^{*\mu}+T^*_\mu W^\mu}{8} & \frac{T_\mu T^{*\mu}+T^*_\mu T^\mu}{8} \end{matrix}\right|^{\frac{1}{3}} \mathrm{D}(4)^{-\frac{1}{2}}\sqrt{-\mathrm{g}}$$

The power of D(4) needs to be -1/3 and not -1/2. This error has been fixed in version 43.

D(4) is a square volume determinant which does not involve the 3 accelerations in the 3D foliation. Whenever a volume determinant is used as a denominator, it a) Should not involve the acceleration fields which calculate the action, b) The denominator’s job is to prevent trivial solutions to the minimum action principle.

In https://arxiv.org/pdf/1806.05244, version 43, the Lagrangian,

$$L=\left|\begin{matrix} 1 & 0 \\ 0 & \frac{U(0)^k U(0)^*_k + U(0)^{*k} U(0)_k}{8} \end{matrix}\right|\sqrt{-\mathrm{g}}$$
$$+\left(\frac{1}{8}\left(U^{*\mu}(1)U_\mu(1)+U^\lambda(1)U^*_\lambda(1)\right)-\frac{1}{16}\left(\frac{P_\mu(0)}{\sqrt{Z(0)}}U^{*\mu}(1)+\frac{P^*_\nu(0)}{\sqrt{Z(0)}}U^\nu(1)\right)^2\right.$$
$$\left.-\frac{1}{16}\left(\frac{U_\mu(0)U^{*\mu}(1)+U^*_\lambda(0)U^\lambda(1)}{\sqrt{\frac{1}{2}\left|U^{*\beta}(0)U_\beta(0)+U^\alpha(0)U^*_\alpha(0)\right|}}\right)^2\right)\mathrm{G}(3)^{-\frac{1}{2}}\sqrt{-g}$$
$$+\left|\begin{matrix} 1 & \frac{p_\mu S^{*\mu}+p^*_\mu S^\mu}{2\sqrt{2Z}} & \frac{p_\mu W^{*\mu}+p^*_\mu W^\mu}{2\sqrt{2Z}} & \frac{p_\mu T^{*\mu}+p^*_\mu T^\mu}{2\sqrt{2Z}} \\ \frac{p_\mu S^{*\mu}+p^*_\mu S^\mu}{2\sqrt{2Z}} & \frac{S_\mu S^{*\mu}+S^*_\mu S^\mu}{8} & \frac{S_\mu W^{*\mu}+S^*_\mu W^\mu}{8} & \frac{S_\mu T^{*\mu}+S^*_\mu T^\mu}{8} \\ \frac{p_\mu W^{*\mu}+p^*_\mu W^\mu}{2\sqrt{2Z}} & \frac{W_\mu S^{*\mu}+W^*_\mu S^\mu}{8} & \frac{W_\mu W^{*\mu}+W^*_\mu W^\mu}{8} & \frac{W_\mu T^{*\mu}+W^*_\mu T^\mu}{8} \\ \frac{p_\mu T^{*\mu}+p^*_\mu T^\mu}{2\sqrt{2Z}} & \frac{T_\mu S^{*\mu}+T^*_\mu S^\mu}{8} & \frac{T_\mu W^{*\mu}+T^*_\mu W^\mu}{8} & \frac{T_\mu T^{*\mu}+T^*_\mu T^\mu}{8} \end{matrix}\right|^{\frac{1}{3}} \mathrm{D}(4)^{-\frac{1}{3}}\sqrt{-\mathrm{g}} \qquad (64.\mathrm{b})$$

Does use $\frac{U_\mu(0)}{\sqrt{\square}}$ but $U_\mu(0)$ does not contribute to the absolute value of

$$+\left(\frac{1}{8}\left(U^{*\mu}(1)U_\mu(1)+U^{\lambda}(1)U_\lambda^*(1)\right)-\frac{1}{16}\left(\frac{P_\mu(0)}{\sqrt{Z(0)}}U^{*\mu}(1)+\frac{P_\nu^*(0)}{\sqrt{Z(0)}}U^{\nu}(1)\right)^2\right.$$

$$\left.-\frac{1}{16}\left(\frac{U_\mu(0)U^{*\mu}(1)+U_\lambda^*(0)U^{\lambda}(1)}{\sqrt{\frac{1}{2}\left|U^{*\beta}(0)U_\beta(0)+U^{\alpha}(0)U_\alpha^*(0)\right|}}\right)^2\right)\mathrm{G}(3)^{-\frac{1}{2}}\sqrt{-g}$$

It means that this part of the Lagrangian assesses the action by $U_\mu(1)$, and avoids the inclusion of components of the electric field $U_\mu(0)$ but instead used acceleration in the perpendicular Lagrangian plane (in terms of symplectic geometry).